The Adsorption of Certain Transformer-Oil Oxidation Products by Solid Insulating Materials

standard GOST 4194-48. The concentration of the acids was such as to give a neutralisation value of the order of 1 mg KOH/g and the concentrate of naphthenates was about 0.1% by weight. The tests were made in sealed glass vessels with a nitrogen atmosphere. Each vessel contained 60 grams of insulating material previously dried and impregnated with transformer oil and 140 g of the same oil containing the appropriate contaminant in solution. The vessels were maintained at a temperature of 95°C for 42 days. The amounts of acids and naphthenates adsorbed were estimated from their change in concentration in the oil. The results are tabulated and plotted graphically. Organic acids of low molecular weight are preferentially adsorbed. For example, in 42 days the paper adsorbed 93 to 95% of the acetic acid and 64% of the oleic acid, 13% of the naphthenic acid and 10% of the stearic acid. The rate of adsorption is highest during the first 5 to 6 days and then slows off.

SOV/110-59-5-10/25

The Adsorption of Certain Transformer-Oil Oxidation Products by Solid Insulating Materials

The cable-paper is able to adsorb considerable quantities of low molecular weight acid. Naphthenates are also adsorbed more rapidly during the first three days and copper naphthenate is adsorbed more intensively than iron naphthenate. There are 2 graphs, 1 table and 9 references, 7 of which are Soviet, 1 English and 1 German.

SUBMITTED: 17th November 1958

Card 3/3

LIPSHTEYN, R.A.

PHASE I BOOK EXPLOITATION SOV/4502

Akademiya nauk SSSR. Nauchnyy sovet po probleme zharoprochnykh splavov

Issledovaniya po zharoprochnym splavam, tom 6 (Investigations of Heat-Resistant Alloys, Vol. 6) Moscow, 1960. 319 p. Errata slip inserted. 3,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut metallurgii imeni A. A. Baykova. Nauchnyy sovet po probleme zharoprochnykh splavov.

Editorial Board: I. P. Bardin (Deceased) Academician, G. V. Kurdyumov, N. V. Ageyev, Corresponding Member, Academy of Sciences USSR (Resp. Ed.), I. A. Oding, I. M. Pavlov, and I. F. Zudin, Candidate of Technical Sciences; Ed. of Publishing House: V. A. Klimov; Tech. Ed.: S. G. Tikhomirova.

PURPOSE: This book is intended for research workers in the field of physics of metals and for metallurgists, particularly those working on heat-resistant alloys.

COVERAGE: This collection of 45 articles deals with various problems in the production of heat-resistant alloys. Special attention is paid to the mechanisms of deformation of such metals as aluminum, copper, iron, and nickel. Various defects and failures of metals are analyzed, and means for increasing the heat resistance and plasticity are described. Among the special problems discussed are: electrolytic conductivity of iron-aluminum alloys in the solid state; the mobility of atoms in nickel-iron alloys, depending upon defects of their crystalline structure; the kinetics of change in isolated pores; the irreversible thermal transformation of solid bodies, etc. No personalities are mentioned. References follow each article.

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LIPSHTEYN, R.A., SHTERN, Ye.N.

Causes of dielectric losses in transformer oil at a frequency of 50 cps. Inzh.-fiz.zhur. no.2:101-104 F '60. (MIRA 13:7)

1. Vsesoyuznyy teplotekhnicheskiy nauchno-issledovatel'skiy institut im. F.E. Dzerzhinskogo, Moskva.
(Insulating oils) (Dielectrics)

81812
S/096/60/000/08/012/024
E194/E484

26.1000

AUTHORS: Lipshteyn, R.A., Khaykina, S.E. and Ginzburg, E.S., Candidates of Technical Sciences

TITLE: The Resistance of Gas Turbine Metals to Vanadium Corrosion

PERIODICAL: Teploenergetika, 1960, Nr 8, pp 57-60 (USSR)

ABSTRACT: The use of sulphurous fuel oil in gas turbines is associated with vanadium corrosion of the blades at temperatures above 625°C. Vanadium is present in the fuel oil in the form of metallo-organic compounds and sodium in the form of sodium chloride. During the process of combustion the vanadium oxidizes to V_2O_5 and the sodium chloride is converted into sodium sulphate. Tests were made in which samples of steel, 6 mm diameter and 30 mm long, were immersed to a third of their height in ash of known composition. Samples that had been treated in this way were placed in an electric furnace where the temperature was maintained constant for periods up to 60 hours with a steady flow of air. After cooling, corrosion products were removed from the samples, either mechanically or by chemical means. Tests were made on

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The Resistance of Gas Turbine Metals to Vanadium Corrosion

austenitic chrome nickel steel grades EYalT,[7] EI-405,[7] EI-612[7] and nickel-base alloys of the Nimonic type, see Table 1. Test results with ash containing various amounts of V_2O_5 and Na_2SO_4 when corroding steel grade EYalT at temperatures of 625, 750 and 800°C, are given in Fig 1. At all temperatures there is a clear maximum in the corrosion corresponding to an ash containing 87% V_2O_5 and 13% Na_2SO_4. Pure vanadium pentoxide causes relatively little corrosion at temperatures below 750°C and pure sodium sulphate causes relatively little corrosion at temperatures up to 800°C. The composition of the most corrosive mixture corresponds to a compound of formula $Na_2O \cdot V_2O_4 \cdot 5V_2O_5$ which has a melting point of 625°C. It is of interest to compare the corrosion of steel EYalT with this artificial mixture of vanadium pentoxide and sodium sulphate with corrosion obtained under practical conditions. Data on corrosion of this steel under practical conditions lies surprisingly close to the corrosion curves with the artificial ash at 750°C, see Fig 1. Tests with the

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The Resistance of Gas Turbine Metals to Vanadium Corrosion

various steels were made within the temperature range of 625 to 800°C and durations of 15 to 60 hours with the most corrosive mixture of artificial ash. As will be seen from the results given in Fig 2, the temperature is a decisive factor and the rate of corrosion greatly increases with the temperature. Fig 3 shows the amount of corrosion products formed also increased with time, there is often an initial induction period followed by an auto-catalytic type of curve. The different grades of steel do not all perform in the same way at different temperatures and the differences are discussed. The corrosion products of different steels also differ in appearance. The low corrosion resistance of steel EI-405 is attributed to its 2.5% content of molybdenum. It is supposed that the molybdenum oxide MoO_3 formed during vanadium corrosion of the steel has a high vapour pressure at a temperature of 750 to 800°C which tends to throw the scale off the metal and to bare the metal surface to further corrosion. It is concluded that the use of molybdenum should be avoided in steels subject to vanadium corrosion.

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The Resistance of Gas Turbine Metals to Vanadium Corrosion

The nickel-base Nimonic alloy behaves better than chrome-nickel austenitic steel but it could not be successfully used in gas turbines burning high sulphur fuel oils at temperatures of 650°C and above since, in the presence of the corrosive mixture of vanadium oxide and sodium sulphate, Nimonic alloy has a 12% loss of weight after 60 hours at 750°C and 18% at 800°C. The problem accordingly arose of improving the vanadium corrosion resistance of gas turbine blades of steels EI-405 and EI-612 by chemical-thermal treatment of the surface, saturating them with chromium, aluminium or nitrogen. To this end, samples of these steels were appropriately treated and the corresponding test results are given in Table 2. Treatment of steel EI-612 with chromium plus nitriding gives a considerable improvement in corrosion resistance at 750°C but increasing the temperature to 800°C completely removes this effect and even impairs the resistance of the steel to vanadium corrosion. Additional special investigations are required to elucidate the reason for this effect. It is

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E194/E484

The Resistance of Gas Turbine Metals to Vanadium Corrosion

interesting that platinum[11] porcelain and quartz are also subject to vanadium corrosion at high temperatures. There are 3 figures, 2 tables and 8 references, 7 of which are Soviet (4 of these being Russian translations from Proceedings of World Petroleum Congress) and 1 English.

ASSOCIATION: Vsesoyuznyy teplotekhnicheskiy institut (All-Union Thermo-Technical Institute)

Card 5/5

4

S/081/62/000/007/027/033
B168/B101

AUTHORS: Ivanov, K. I., Lipshteyn, R. A., Mikhel'son, A. Ya., Luzhetskiy, A. A.

TITLE: A method of evaluating the operational characteristics of inhibited insulating oils

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 7, 1962, 550-551, abstract 7M197 (Sb. "Prisadki k maslam i toplivam". M., Gostoptekhizdat, 1961, 290-297)

TEXT: A test-bench method of evaluating the operational characteristics of transformer oils has been devised (a diagram of the apparatus is given). Essentially this method consists of testing the oil for aging over a period of 750 hours in a low-power transformer running without load at twice the maximum field intensity. In order to reduce the time taken by the test the aging process of the transformer oil is speeded up by using special devices for heating the oil to 95°C, for saturating it with oxygen and for circulating the oil in the field zone. The quality of the transformer oil is determined, while the oil is in use, from changes in a

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A method of evaluating the ... S/081/62/000/007/027/033
B168/B101

group of characteristics - namely, tendency to form low-molecular water-soluble acids in the initial stages of aging (after 100 hours), general acidity, quantity of sediment, tangent of angle of dielectric losses (tan δ), condition of the solid insulation, corrosive attack on copper, etc. With this method it is possible to make a more objective and broader evaluation of the operational characteristics of a transformer oil than by other, familiar, methods. A number of tests were carried out by this method on home-produced commercial and experimental oils and also on imported commercial oils. [Abstracter's note: Complete translation.]

Card 2/2

36542
S/081/62/000/006/075/117
B149/B108

11.0137

AUTHORS: Lipshteyn, R. A., Khaykina, S. E., Avetisyan, A. S., Blagova, T. A.

TITLE: Additives to liquid gas turbine fuels for the prevention of ash deposition and of corrosion of vanadium

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 6, 1962, 536, abstract 6M220 (Sb. "Prisadki k maslam i toplivam", M., Gostoptekhizdat, 1961, 366 - 374)

TEXT: About 20 substances were tested by static and dynamic methods under laboratory conditions as well as in a gas turbine unit ГТУ600-1,5 (GTU 600-1.5) of 1500 hp, for their effectiveness as additives to fuel, preventing ash deposition between the inlets and outlets of the turbines and protecting the vanadium blades from corrosion. ДТ-1 (DT-1), ДТ-2 (DT-2), and sulfur-containing 40 and 60 fuel oils (mazut) were used as fuels. The experiments on GTU have shown that normal working can be maintained with mazut during ≤2 days, as the rapid formation of deposits blocks the turbine. The addition of 0.2% (by weight) of kaolin to mazut decreases

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X

S/081/62/000/006/075/117
B149/B108

Additives to liquid gas ...

the deposit formation, and in working with motor fuel it prevents the corrosion of vanadium in steel ЭЯ1Т (EYa1T), ЭИ 405 (EI405), ЭИ612 (EI612) at gas temperatures $\leq 700^{\circ}$. Besides kaolin, the following additives were tested and are recommended: montmorillonite, dolomite, MgO, and $MgSO_4$.
[Abstracter's note: Complete translation.]

X

Card 2/2

S/110/61/000/001/009/023
E032/E455

AUTHORS: Shakhnovich, M.I., Engineer and
Lipshteyn, R.A., Candidate of Technical Sciences

TITLE: Effect of Electric Field on the Heat Transfer in Insulating Oil

PERIODICAL: Vestnik elektropromyshlennosti, 1961, No.1, pp.31-33

TEXT: In an experiment on the oxidation of transformer oil in an electric field, it was found that the thermal conductivity of the oil was a function of the field. Experiments designed to elucidate this effect were carried out in a glass container designed for the oxidation of the oil in an electric field. Carefully filtered and dried oil was employed (water content less than 0.0005%). The nominal maximum strength of the electric field in the oil was varied between 18.3 and 49.0 kV/cm, i.e. within the working limits of Soviet transformers. The oil was found to change its temperature on application of the electric field. Fig.1 shows the change in the temperature of the transformer oil for different values of the field (as indicated), as a function of time in minutes for three different oils. It was found that the increase in temperature depends not only on the electric field but

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S/110/61/000/001/009/023
E032/E455

Effect of Electric Field on the Heat Transfer in Insulating Oil

also on the chemical composition of the oil. The change in temperature is smaller for high-purity oils. It is stated that the experimental material obtained is not sufficient for the formulation of a theory of the effect of the electric field on the temperature of the oil. There are 2 figures.

SUBMITTED: May 27, 1960

Fig.1.

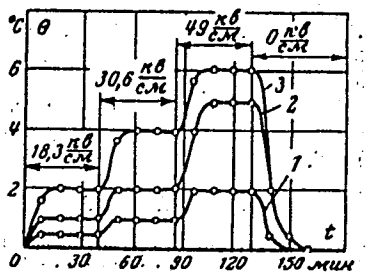

Рис. 1. Превышение температуры трансформаторного масла при различной напряженности электрического поля.

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S/096/61/000/002/009/014
E111/E194

AUTHORS: Lipshteyn, R.A., Candidate of Technical Sciences, Khaykina, S.E., Candidate of Technical Sciences, and Ginzburg, E.S., Candidate of Technical Sciences

TITLE: Vanadium Corrosion in Boiler Installations

PERIODICAL: Teploenergetika, 1961, No.2, pp. 61-62

TEXT: The authors show that vanadium corrosion of boiler tubes working on high sulphur fuel oils is appreciable. Results are shown in Table 1 and give comparative data on corrosion of type ЭЯ1Т (EYa1T) steel in 60 hours at 750 °C by artificial and real deposits. Previous work (Ref.1) suggested that corrosion did not occur if there was no oxygen in the gases. The present investigation was undertaken to study the influence of oxygen concentration in the gas. Type Э1Ц-405 (EI-405) steel (0.11% C, 0.46% Si, 0.72% Mn, 14.1% Cr, 13.2% Ni, 1.36% Nb and 2.5% Mo) was used. The washed and dried 6 mm diameter, 30 mm long cylindrical specimen was weighed and then, while embedded in an artificial ash (87% V_2O_5, 13% Na_2SO_4) at 800 ± 5 °C, was subjected to the action of a nitrogen-oxygen mixture (up to about 95% O_2).

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S/096/61/000/002/009/014
E111/E194

Vanadium Corrosion in Boiler Installations

The apparatus (figure, page 62) provides for measurement of gas-volume changes produced by reaction with the specimen/ash. Specimen weight changes were also determined. The results (Table 2) show that the higher the oxygen content the greater the corrosion. The results suggest that combustion gases with 3-4% oxygen will produce vanadium corrosion if metal surface temperatures are over 650 °C and the deposits are relatively high in vanadium. Corrosion will start on superheater and radiation tubes.
There are 1 figure, 2 tables and 3 references: 2 Soviet and 1 English.

ASSOCIATION: Vsesoyuznyy teplotekhnicheskiy institut
(All-Union Heat Engineering Institute)

Card 2/2

LIPSHTEYN, R.A.; IVANOV, K.I.; MIKHEL'SON, A.Ya.

Evaluation of the performance characteristics of transformer oils. Khim. i tekh.topl.i masel 6 no.7:63-70 Jl '61. (MIRA 14:6)

1. Vsesoyuznyy teplotekhnicheskiy institut im. Dzerzhinskogo.
(Insulating oils)

S/065/61/000/007/005/005
E194/E435

AUTHORS: Lipshteyn, R.A., Ivanov, K.I. and Mikhel'son, A.Ya.

TITLE: Assessment of the service properties of transformer oils

PERIODICAL: Khimiya i tekhnologiya topliv i masel, 1961, No.7, pp.63-70

TEXT: Existing laboratory methods of testing transformer oils do not assess them fully. Accordingly, the Laboratoriya nefti (Petroleum Laboratory) of the VTI has developed a method of assessing transformer oil in small transformers. These transformers operate at twice the rated voltage and, to reduce the test time, ageing of the oil is intensified by heating it to a temperature of 95°C, saturating it with oxygen and by circulation of the oil. The oil is assessed by measuring the contents of low and high molecular weight acids, the amount of sludge, the dielectric loss angle, the condition of the solid insulation, corrosivity to copper and other tests. These rig tests give results that are in agreement with VTI experience of the service performance of the oils in question and data obtained by A.A.Luzhetskiy. Test results on a considerable number of oils are

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Assessment of the service ...

given. In general, Soviet oils from low sulphur crudes were unsatisfactory usually because of excessive formation of low molecular weight acids or sludge. Even the best of the Baku oils did not give such good rig test results as imported British and French oils. Oils produced from high sulphur crudes were also generally unsatisfactory. Di-terbutylparacresol (DBPC) effectively improved the oxidation stability of many of the oils. However, the results of rig tests on inhibited oils are sometimes not so favourable as might be expected from laboratory bench tests. The usual relationship between depth of refining and inhibitor response is reported. With base oil of satisfactory quality, the content of DBPC may be reduced from 0.3 to 0.2%, but further reduction to 0.1% gives poor performance. The All-Union Scientific Research Institute of the Petroleum Industry (VNII NP) and the Novo-Kuybyshev Refinery developed a method of manufacturing hydrofined transformer oil from high sulphur crudes without solvent treatment. Although bench test results are satisfactory, heavy sludge formation was experienced in laboratory transformers and, accordingly, stricter requirements were applied to this oil in

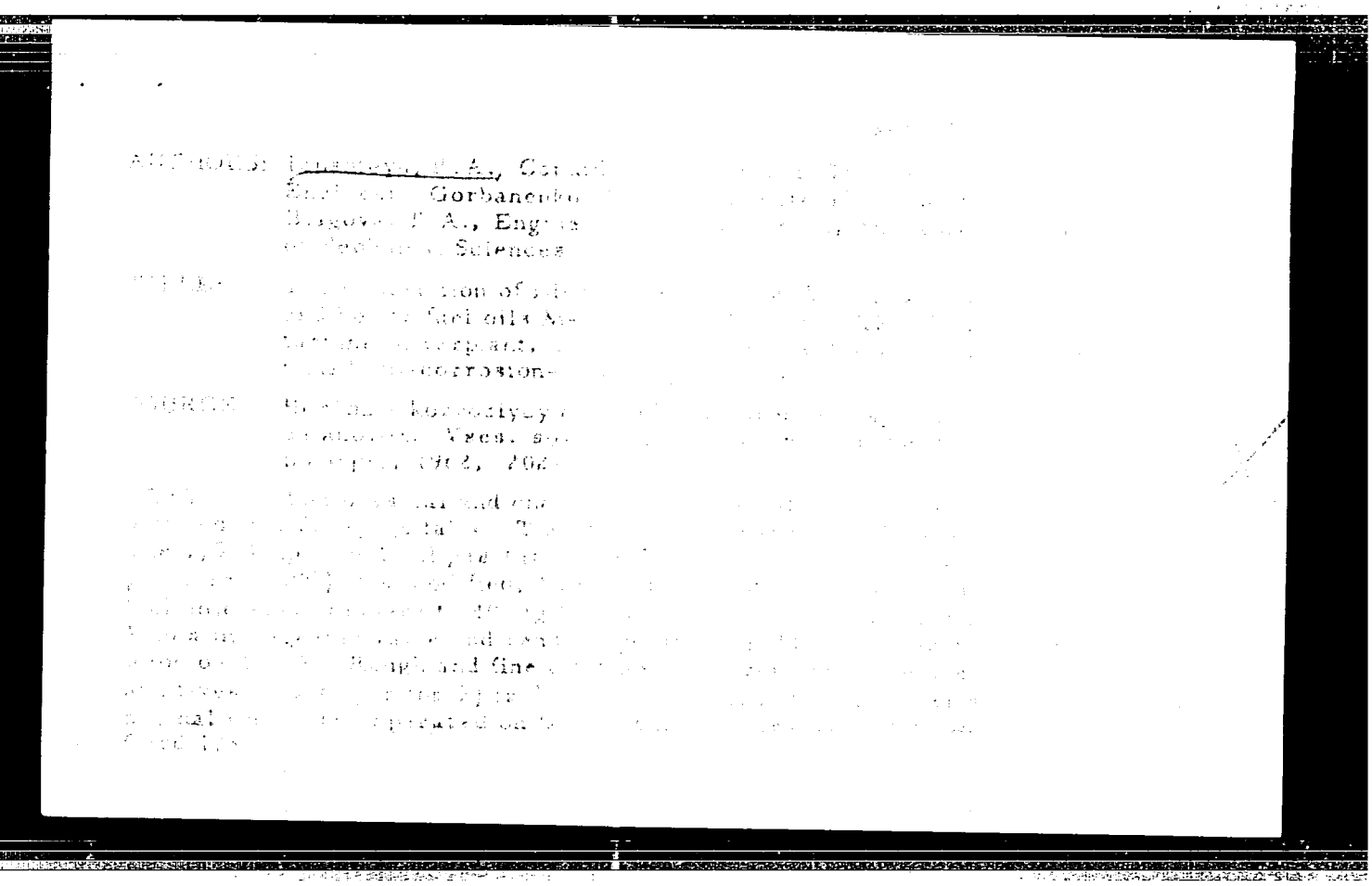
respect of sludge formation in the fourteen hour oxidation test of the standard ГОСТ 981-55 (GOST 981-55). The second production batch of hydrofined oil was also refined by percolation and gave much better rig test results. On the basis of the work, it is recommended that if transformer oils are made from new crudes by new refinery processes, or with new additives, they should be admitted to general use only after being subjected to a 750 hour rig test on experimental transformers using the procedure of the VTI. The existing standard for transformer oils ГОСТ 982-56 (GOST 982-56) should be tightened up in respect of dielectric loss angle, and for aromatic oils in respect of sludge formation after oxidation. Some tightening up in neutralization value after oxidation is also to be recommended. When further experience has been accumulated the standard should be extended to include such characteristics as colour, interfacial tension, stability of electrical properties on laboratory ageing, copper strip test and gassing properties in hydrogen atmosphere. There are 2 figures, 4 tables and 5 Soviet references.

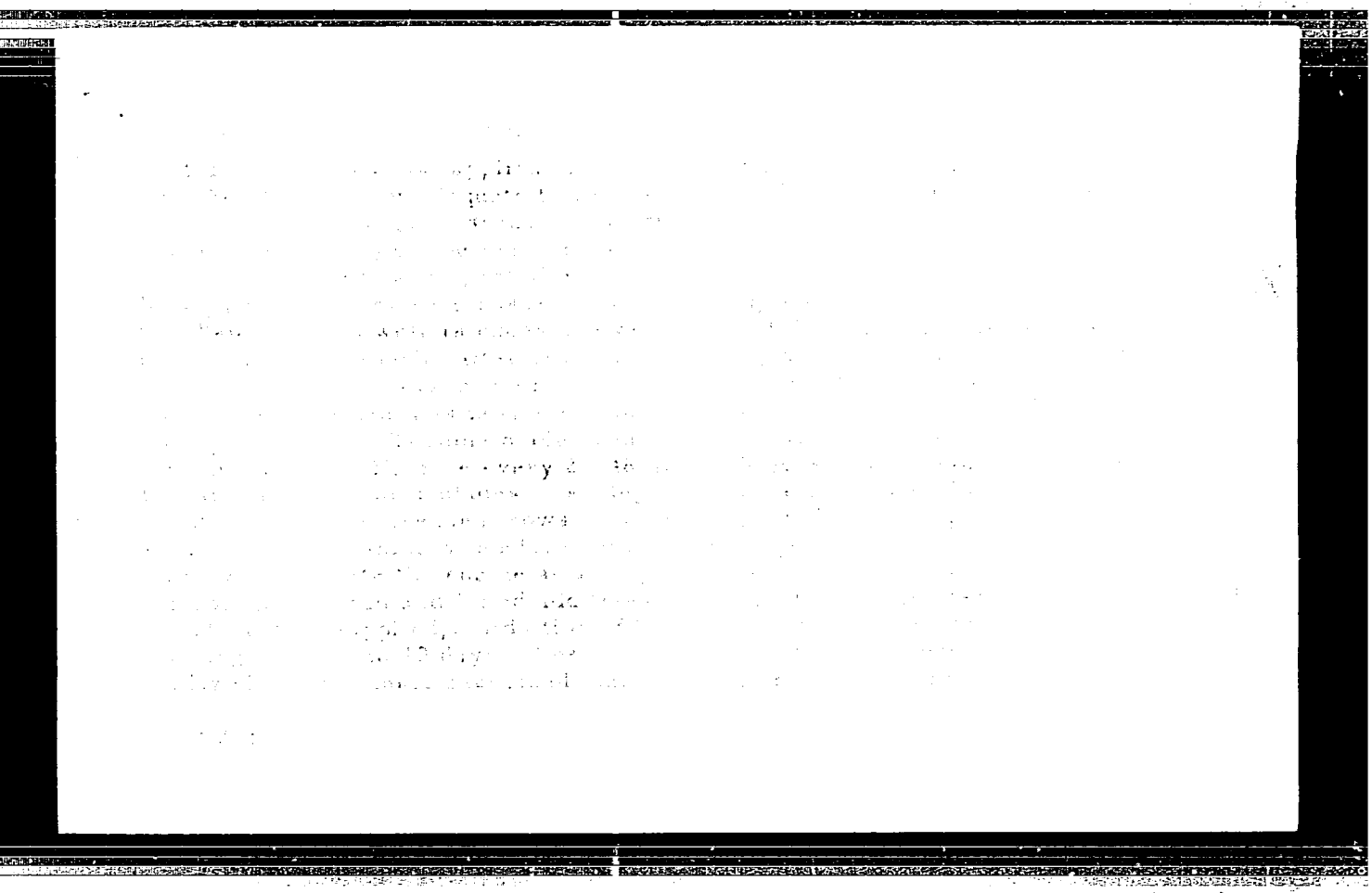
ASSOCIATION: VTI im. Dzerzhinskogo (VTI im. Dzerzhinskiy)

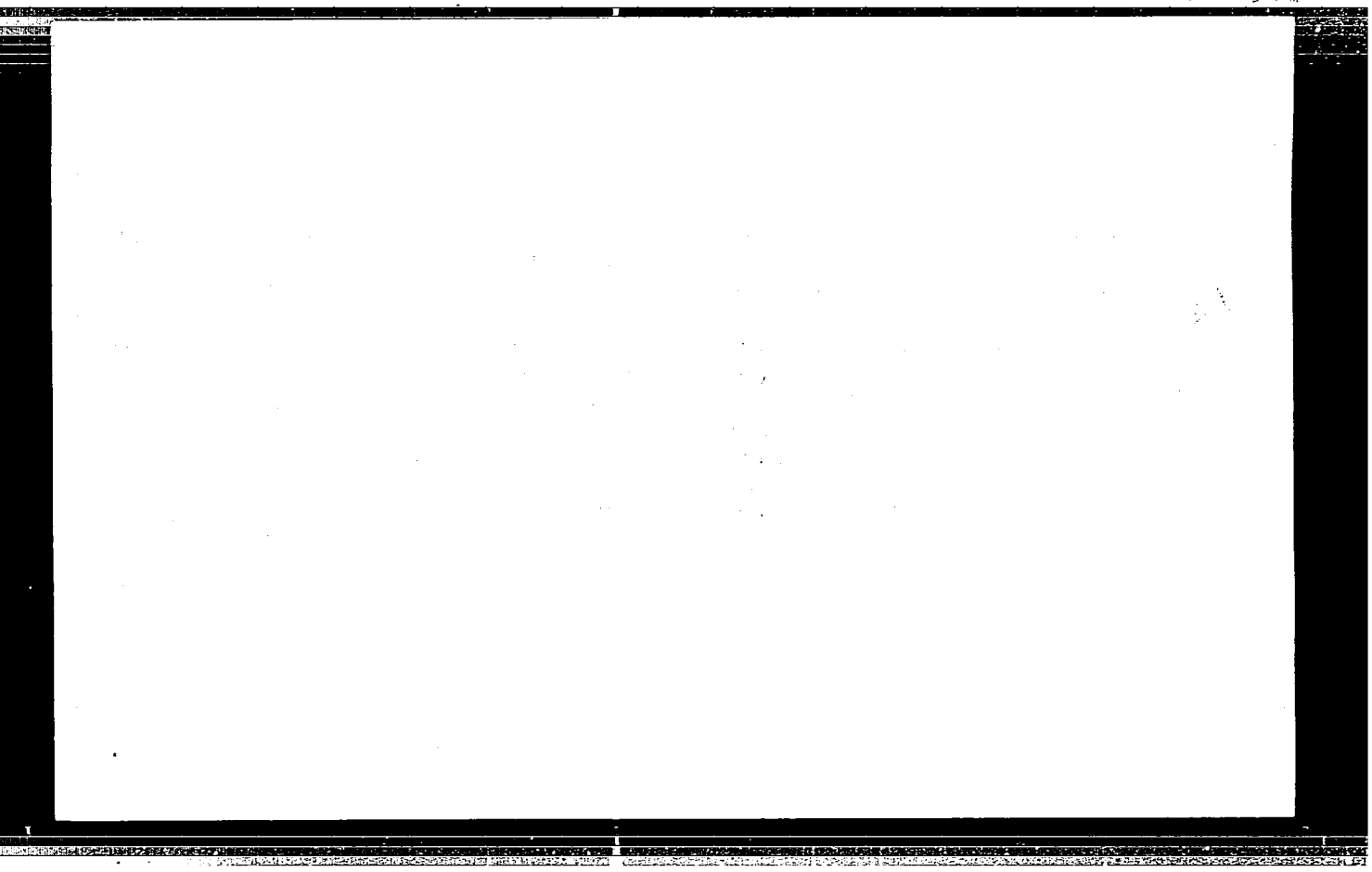
ABRAMSON, D.S., kand. tekhn. nauk, red.; LIPSHTEYN, R.A., kand. tekhn. nauk, red.; LOSIKOV, B.V., prof., doktor tekhn. nauk, red.; YEVSTAF'YEVA, N.P., red. izd-va; EL'KIND, V.D., tekhn. red.

[Preventing the corrosion of internal combustion engines and gas-turbine units] Bor'ba s korroziei dvigatelei vnutrennego sgoraniia i gazoturbinnykh ustanovok. Moskva, Mashgiz, 1962. 295 p. (MIRA 15:4)

1. Vsesoyuznyy sovet nauchno-tekhnicheskikh obshchestv.
(Corrosion and anti-corrosives)
(Gas and oil engines) (Gas turbines)







APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000930030010-5"

AUTHORS: Blagova, T.A., Lipsit...

TITLE: ...analysis of ... and external deposits on ... gas-turbine ...

SOURCE: Bor'ba s korroziyey dvigateley vnutrennego sgoraniya i gas... ustanovok. Vses. sovet nauchn.-tekhn. obsh... Mashgiz, 1962, 289-294.

TEXT: Although the ash content of bunker fuel oil is not ... constituted that they adhere readily to the ... of a boiler and the gas-flow-affected portion of ... thereby, the efficiency and the time between overhauls of such ... above 600°C the ashes are conducive to corrosion attributable to ... aggravating the existing V corrosion. Some ash components ... and ... inhibit, to a degree, the formation of deposits ... Determination of the composition of the ashes is rendered difficult by ... with the determination of those cations ... analysis of deposits in the GT 600-1,5 (600 ... 1,000 hp) operating on M-40 bunker fuel oil identifies Na, V, ...

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[illegible] of the components of the [illegible]

[illegible] Mn, [illegible] also [illegible] present. T[illegible] the [illegible] analysis of [illegible] elements, [illegible] chelaton [illegible] (EDTA) and flame photometry. The analysis [illegible] step by step, together with a control analysis for the SO[illegible]. The [illegible] references (12 Russian-language Soviet, [illegible] namely, Harris, W.S., [illegible], T.[illegible], Anal. Chem. [illegible] 1952, and M[illegible], C.R., Nippler, R.W., [illegible] a Russian translation of Treadwell's well-known textbook (T[illegible] of Analytical Chemistry, v.II, Quantitative Analysis, 19[illegible]).

[illegible] None given.

Card [illegible]

LIPSHTEYN, R.A., kand.tekhn.nauk; SHTERN, Ye.N., inzh.

Effect of soaps on the dielectric losses in petroleum transformer oil. Vest. elektroprom. 33 no.10:58-61 O '62. (MIRA 15:9)

(Electric transformers)
(Insulating oils)

IVANOV, K.I., red.; LIPSHTEYN, R.A., red.; SHAKHNOVICH, M.I., red.; EMINOVA, Ye.A., red.; LEVINA, Ye.S., ved. red.; YAKOVLEVA, Z.I., tekhn. red.

[Improving the quality of transformer oils]Uluchshenie kachestva transformatornykh masel; trudy nauchno-tekhnicheskogo soveshchaniia. Pod red. K.I.Ivanova, i dr. Moskva, Gostoptekhizdat, 1962. 134 p. (MIRA 15:12)

1. Nauchno-tekhnicheskoye soveshchaniye po uluchsheniyu kachestva transformatornykh masel iz vostochnykh sernistykh i drugikh neftei. 1961.

(Petroleum--Refining)

SHAKHNOVICH, M.I., kand.tekhn.nauk; LIPSHTEYN, R.A., kand.tekhn.nauk

Aging of solid electric insulating materials subject to the action of oxidizing agents contained in transformer insulating oil. Vest. elektroprom. 33 no.12:25-28 D '62. (MIRA 15:12)
(Insulating oils) (Electric insulators and insulation)

DZHUVARLY, Chingiz Mekhtiyevich; IVANOV, Konstantin Ivanovich; KURLIN, Mikhail Vladimirovich; LIPSHTEYN, Rafail Aleksandrovich; MUKHARSKAYA, Leyli Adamovna; LEVINA, Ye.S., ved. red.; YAKOVLEVA, Z.I., tekhn. red.

[Insulating oils] Elektroizoliatsionnye masla. [By] Ch.M. Dzhuvarly i dr. Moskva, Gostoptekhizdat, 1963. 274 p. (MIRA 16:4)

(Insulating oils)

LIPSHTEYN, R.A., kand.tekhn.nauk; SHTERN, Ye.N., inzh.

Gas-proof features of transformer oils in an electric field.
Vest. elektroprom. 34 no.2:40-45 F '63. (MIRA 16:2)
(Electric fields) (Insulating oils)

LIPSHTEYN, R.A., kand.tekhn.nauk; SHTERN, Ye.N., kand.tekhn.nauk

Methods foe determining the tendency of oils to increase the tangent of the dielectric losses during its aging. Elektrotekhnika 34 no.12: 19-22 D '63. (MIRA 17:1)

LIPSHTEYN, Rafail Aleksandrovich; MIKHAYLOVICH, Mikhail Isaakovich; LOSIKOV, B.V., prof., red.

[Transformer oil] Transformatornoe maslo. Moskva, Energiia, 1964. 317 p. (Polimery v elektroizolatsionnoi tekhnike, no.9) (MIRA 17:9)

ACCESSION NR: AP4025422 S/0096/64/000/004/0042/0044

AUTHORS: Lipshteyn, R. A. (Candidate of technical sciences); Avetisyan, A. S. (Engineer); Blagova, T. A. (Engineer); Kosobokova, E. M. (Engineer); Chuykova, T. A. (Engineer)

TITLE: The effect of the fuel ash on vanadium corrosion of metals

SOURCE: Teploenergetika, no. 4, 1964, 42-44

TOPIC TAGS: corrosion, vanadium corrosion, vanadium pentoxide, sodium sulfate, fuel, petroleum residue, fuel ash, turbine, turbine vane, steel EI-405, steel EYa-1T, diesel oil, sulfur, fuel combustion stand

ABSTRACT: The corrosive effect on samples of metals kept in ash containing vanadium pentoxide and sodium sulfate was reported on in an earlier paper by R. A. Lipshteyn, S. E. Khaykina, and E. S. Ginzburg ("Teploenergetika", No. 8, 1960). The most corrosive mixture contained a ratio 87/13 of V_2O_5/Na_2SO_4. Since the ash deposits on the vanes of GTU 600-1.5 turbines (fueled by sulfur-containing petroleum residues) consisted mainly of V_2O_5 and Na_2SO_4, the authors' intention was to

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ACCESSION NR: AP4025422

prove the corrosiveness of such fuels by direct experiment. They constructed a small unit provided with a spray burner, of a 2L/hr capacity, as well as with a chamber containing the metallic samples, which were exposed to the corrosive effect of the combustion gases, at a temperature range of 700-900C. The fuel used was a vanadium-free diesel oil, containing 0.9% sulfur, in which were dissolved the desired metalloorganic compounds. In the first series of experiments the ratio of V_2O_5/Na_2SO_4 varied, while keeping the total ash content of the oil constant at 0.0537%. It was found, that the corrosive aggressiveness of the fuel depended to a large extent on the temperature. Thus, at 900C the maximum corrosiveness was obtained with fuels containing 96% V_2O_5 in their ash, while at 700C the optimum corrosive concentration of V_2O_5 was 91%. In the second series of experiments the concentration of V_2O_5 in the fuel was kept constant at 0.053%, while to it were added either 0.006% Na_2SO_4 or 0.002% Pb, Cu, Ni, or Fe. It was found that the addition of Na_2SO_4 reduced somewhat the corrosiveness of vanadium, as did the addition of lead and iron. Orig. art. has: 5 charts and 2 tables.

ASSOCIATION: Vsesoyuzny*y teplotekhnicheskiy institut (All-Union Thermo-technical Inst.)

Card 2/3 2

ACCESSION NR: AP4044559 S/0096/64/000/009/0019/0022

AUTHORS: Lipshteyn, R. A. (Candidate of technical sciences); Avetisyan, A. S. (Engineer); Blagova, T. A. (Engineer); Kosobokova, E. M. (Engineer); Chuykova, T. A. (Engineer)

TITLE: On the problem of using petroleum fuel with vanadium corrosion-reducing additives in gas turbines

SOURCE: Teploenergetika, no. 9, 1964, 19-22

TOPIC TAGS: fuel additive, fuel, silicon, magnesium, calcium, zinc, vanadium, corrosion/ GTU 600 1.5 turbine, EYa 1T steel, EI 405 steel, PMS 15 polymethylsiloxane

ABSTRACT: A set of additives dissolved in fuels was tested in a model fire-test stand for the purpose of lowering vanadium corrosion. The fuels contained 0.03% V, 0.002% Na, and 0.9% S. As metallic specimens steel plates of the type EYa-1T and part of a GTU-600-1.5 turbine blade made of steel EI-405 were selected. The additives included Mg, Ca, Zn, Al, and a polymethylsiloxane (PMS-15). In all cases the ratio of metal or silicon (in the fuel) to vanadium was 3:1 (by weight). At 705C, all but the zinc naphthanate fuel showed vanadium corrosion removal. At 810C, only Mg naphthanates and polymethylsiloxane showed corrosion prevention. At 910C, only Mg naphthanate retained this ability. Magnesium additive No. 50, similar to

ACCESSION NR: AP4044559

magnesium naphthanate, showed complete corrosion removal in steels EI-405 and EYa-1T through the range 700-900C, whereas technical product No. 51 with Si:V = 2:1 content showed a similar behavior only up to 800C. The rest of the additives were less effective. Orig. art. has: 2 figures and 2 tables.

ASSOCIATION: Vsesoyuzny*y teplotekhnicheskiy institut (All-Union Heat Technology Institute)

SUBMITTED: 00 ENCL: 00

SUB CODE: FR, GC, MM NO REF SOV: 010 OTHER: 000

Card 2/2

LIPSHTEYN, R.A.; SHAKHNOVICH, M.I.

Method for determining the oxidizability of transformer oils in the electric field. Khim. i tekh. topl. i masel 9 no.1:63-67 Ja '64. (MIRA 17:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy teplotekhnicheskiy institut im. Dzerzhinskogo i Moskovskiy elektrozavod im. V.V. Kuybysheva.

LIPSHTEYN, R.A.; MIKHEL'SON, A. Ya.; SHTEYN, Ye.M.

Classification of antioxidant additives to lubricants based on the nature of their action. Khim. i tekh. topl. i masel 9 no.6:48-52 Je'64 (MIRA 17:7)

1. Vsesoyuznyy ordena Trudovogo Krasnogo Znameni teplotekhnicheskiy institut imeni Dzerzhinskogo.

LIPSHTEYN, R.A., kand. tekhn. nauk; AVETISYAN, A.S., inzh.; BLAGOVA, T.A., inzh.; KOSOBOKOVA, E.M., inzh.; CHUYKOVA, T.A., inzh.

Effect of the composition of fuel ashes on the vanadium corrosion of metals. Teploenergetika 11 no.4:42-44 Ap '64. (MIRA 17:6)

1. Vsesoyuznyy teplotekhnicheskiy institut.

GORBANENKO, A.D.; ZEGER, K.Ye.; ZERNOVA, T.A.; IVANOV, K.I.; LIPSHTEYN, R.A.; LUZHETSKIY, A.A.; POVOLOTSKIY, L.I.

Importance of ash content in boiler fuels for electric power plants. Standartizatsiia 28 no.1:24-25 Ja '64.
(MIRA 17:1)

LIKHTSHN, R.A., kand.tekhn.nauk; SHTERN, Ye.N., kand.tekhn.nauk

Development of breakdown locations in liquid dielectrics with engineering applications. Elektrotekhnika 35 no.3:15-18 Mr '64. (MIRA 17:5)

LIPSHTEYN, R.A., kand. tekhn. nauk; SHTERN, Ye.N., kand. tekhn. nauk

Dependance of gas resistant oi s on the group structure composition and physical and chemical indices. Elektrotekhnika 35 no.6:62-64 Je '64. (MIRA 17:8)

LIPSHTEYN, R.A., kand. tekhn. nauk; AVETISYAN, A.S., inzh.; BLAGOVA, T.A., inzh.; KOSOBOKOVA, E.M., inzh.; CHUYKOVA, T.A., inzh.

Use of petroleum fuel in a gas turbine system and soluble admixtures for decreasing vanadium corrosion. Teploenergetika 11 no.9:19-22 S '64. (MIRA 18:8)

1. Vsesoyuznyy teplotekhnicheskiy institut.

KULIYEV, R.Sh.; IVANOV, K.T.; [illegible], F.I.; SHAKHNOVICH, M.I.; LIPSHTEYN, R.I.; MUSAYEV, G.T.

Functional properties of transformer oil produced from Siazan' petroleum. Neftepер. i neftekhim. no.4:9-11 '65. (MIRA 18:5)

1. Bakinskiy institut neftekhimicheskikh protsessov i Vsesoyuznyy teplotekhnicheskiy institut.

LIPSHTEYN, R.A., kand.tekhn.nauk; MIKHEL'SON, A.Ya., inzh.; ZIMINA, K.I., kand. tekhn.nauk; SOSINA, N.S., inzh.

Possibility for regenerating oils inhibited by an additive. Elek. sta. 36 no.10:34-36 O '65. (MIRA 18:10)

LIPSITS, D., kand. biolog. nauk (Chernovtsy)

Problems in the biochemistry of infected plants. Zashch. rast. ot vred. i bol. 10 no.3:49-50 '65. (MIRA 19:1)

LIPSITS, D.V.; SPITIOTI, Z.I.

Effect of nutritional factors and of bacterial flora on the reduction potential in faces. Vop. fiziol. no.5:95-99 '53. (MLRA 8:1)

1. Kiyevskiy ordena Trudovogo Krasnogo Znameni meditsinskiy institut im. akad. A.A.Bogomol'tsa. Chernovitskiy meditsinskiy institut.
(FACES,
eff. of nutritional factors & of bact. flora on reduction potential)

LIPSITS, D.V.

The reduction potential of excreta as an index of intensity of putrefactive processes in the intestine in typhoid, dysentery, and some other diseases. Voprosy Pitaniya 12, No.1, 43-50 '53. (MLRA 6:3) (CA 47 no.14:7083 '53)

1. Med. Inst., Chernovitsy.

LIPSITS, D. V.

LIPSITS, D. V. "Restorative Potential as an index of the Intensity of Putrefaction Processes in the Large Intestine." Min Health Ukrainian SSR. Kiev Order of Labor Red Banner Medical Inst imeni Academician A. A. Bogomolets. Kiev, 1955. (Dissertation for the Degree of Candidate of Biological Science)

So: Knizhaya Letopis', No. 17, 1956

LIPSITS, D.V.

Role of hydrogen sulfide in the appearance of a reduction potential in experiments. Vop.med. khim. 2 no.3:182-187 My-Je '56. (MLRA 9:10)

1. Kafedra biokhimii Kiyevskogo meditsinskogo instituta.

(FECES,
sulfur as index of gastrointestinal oxidation-reduction in rats (Rus))
(GASTROINTESTINAL SYSTEM, metabolism,
oxidation reduction, eff. on fecal sulfur in rats (Rus))
(OXIDATION REDUCTION,
gastrointestinal system, eff. on fecal sulfur in rats (Rus))
(SULFUR, determination,
in feces, relation of gastrointestinal oxidation-reduction in rats (Rus))

Lipsits, D.V.

USSR/Plant Diseases. Diseases of Cultivated Plants. N

Abs Jour : Ref Zhur - Biologiya, No 16, 25 Aug 57, 69535

Author : Lipsits, D.V.
Title : The Effect of Roentgen Rays on Potatoes.

Orig Pub : Kartofel, 1957, No 1, 55

Abstract : The All-Union scientific-experimental station on potato tumors conducted studies beginning in 1955 on the ionizing radiation effects on potato tumors and on the vitality of causal organism of tumors. The bulbs received doses of radiation of 200,400 and 800 r; the plants which grew following these developed normally. The susceptible variety of bulb, Woltman, which was subjected to the same doses, and in addition, subsequently to 8200 and 10700 r, was raised on a tumor-infected background. In the author's opinion, the stimulatory effect of radiation of doses of 400 and 800 r on yield of plants grown in uninfected soil is of practical interest.

Card 1/1

LIPSITS, D.V.

LIPKIN, M.Ye.; GVOZKIKOV, S.F.; LIPSITS, D.V.; AYZINGER, F.Z.

Remarks on the control over semifluid colored media. Lab. delo 3 no.1:39-41 Ja-F '57 (MLRA 10:4)

1. Iz oblastnoy sanitarno-epidemiologicheskoy stantsii i Vsesoyuznoy nauchno-issledovatel'skoy stantsii po raku kartofelya, Chernovitsy.
(BACTERIOLOGY--CULTURES AND CULTURE MEDIA)

LIPSITS, D.V.; PASHKAR', S.I.; REYNGARD, T.A.

Biochemical characteristics of wart resistance in potatoes. Biokhim. pl. i ovoshch. no.4:143-163 '58. (MIRA 11:10)

1. Vsesoyuznaya nauchno-issledovatel'skaya stantsiya po raku kartofelya Ministerstva sel'skogo khozyaystva SSSR.
(Potato wart)

LIPSITS, D.V.; AYZINGER, F.Z.

Tissue respiration in the potato plant as related to its wart resistance. Fiziol. rast. 5 no.2:180-182 Mr-Ap '58. (MIRA 11:4)

1.Vsesoyuznaya nauchno-issledovatel'skaya stantsiya po raku kartofelya, Chernovtsy.
(Potato wart) (Plants--Respiration)

LIPSHITS D. V.

EXCERPTA MEDICA Sec 5 Vol 12/7 General Path. July 59

1824. THE GLUTATHIONE SULPHUR AND ASCORBIC ACID CONTENT IN POTATOES AFFECTED WITH CANCER (Russian text) - Lipsiz D. V. Lab. of Physiol. and Biochem., The Union Res. Station of Potato Cancer, Chernovzy, USSR - BIOKHIMIYA 1958, 23/4 (592-600) Tables 8 Illus. 2

'Potato cancer', caused by the fungus Synchytrium endobioticum (Schilb.) Perc. occurs in the USA as well as in certain parts of Europe and the western part of the USSR. A study was made of 5 cancer-sensitive and of 3 cancer-resistant species of potatoes. Some of these potatoes were grown in fungus-infected soil and some in normal soil. Cancer growths were also grafted onto potato leaves and in still other experiments the leaves were sprinkled with a radioactive sulphur-methionine or sodium sulphate solution (specific activity 17 and 25 μc.). In further experiments the soil was treated with radioactive sodium sulphate solution (specific activity 120 and 250 μc.). The harvested plants were subdivided into the separate organs, carefully washed, cut up, fixed for 15 min. at 110°, dried and pulverized. This powder was analysed by the method of Mothes (Planta, 1938, 29, 67; fractionation of the sulphur-containing substances), by the method of Pett (Biochem. J. 1936, 30, 1228), the method of Binet and Weller (Bull. Soc. Chim. biol. 1934, 16, 1284; glutathione determination) and the method of Chevremont and Frederic (Arch. Biol. 1934, 54, 589; histochemical determination of the -SH groups). Findings: S^{35} is accumulated to a greater extent in the tumours than in the normal tissue. There is also an increase of the protein-linked sulphur and of glutathione, and of the radioactivity after introduction of labelled sulphur and of glutathione, and of the radioactivity after introduction of labelled substances. The protein synthesis, determined by incorporation of methionine into the tissue protein, is accelerated in the neoplastic tissue. There exists a certain parallelism between the contents in -SH groups and the neoplastic development. In so far as the potato tubers of the cancer-sensitive strains were affected, their amount of dry substance and their ascorbic acid concentration decreased. On the other hand, the ascorbic acid content (calculated per dry weight) of the neoplastic growths in the leaves is enhanced, especially in the peripheral parts.

Brandt - Berlin (V, 16)

ZAKRIVIDOROGA, S.P.; LIPSITS, D.V.; POLOTAY, V.A.; RED'KO, G.F.; TARAKHOVSKIY, M.L.

Effect of warty potatoes on animal organisms. Vop.pit. 19 no.4: 82-83 Jl-Ag '60. (MIRA 13:11)

1. Iz laboratorii (zav. - kand.biolog.nauk D.V. Lipsits) Vsesoyuznoy nauchno-issledovatel'skoy stantsii po raku kartofelya (Chernovitsy) i kafedr farmakologii (zav. - prof. S.P. Zakrividoroga) i gistologii (zav. - dotsent I.A. Shevchuk) Chernovskogo meditsinskogo instituta.

(POTATOES)

LIPSITS, D.V.

Biochemical study of the resistance of potatoes to wart disease.
Biokhim. pl.i ovoshch. no.6:58-76 '61. (MIRA 14:6)

1. Vsesoyuznaya nauchno-issledovatel'skaya stantsiya po raku kartofelya.
(Potato wart)

LIPSITS, D.V.; KRUGLYAKOVA, K.Ye.; POSTNIKOVA, M.S.; EMANUEL', N.M.

Suppression of the development of vegetable tumors (potato canker) by inhibitors of radical processes. Dokl.AN SSSR 145 no.1:212-214 Jl '62. (MIRA 15:7)

1. Vsesoyuznaya nauchno-issledovatel'skaya stantsiya po raku kartofelya Vsesoyuznogo instituta zashchity rasteniy i Institut khimicheskoy fiziki AN SSSR. 2. Chlen-korrespondent AN SSSR (for Emanuel').

(Potato wart) (Gallic acid)

LIPSITS, D.V., kand.biolog.nauk; KHIZHNYAK, P.A., kand.sel'skokhoz.nauk; SAZONIK, Kh.V.

Effect of gamma radiation on potato wart. Zashch.rast.ot vred.i bol. 4 no.6:47-48 N-D '59. (MIRA 15:11)

1. Vsesoyuznaya stantsiya po raku kartofelya Vsesoyuznogo instituta zashchity rasteniy, g. Chernovtsy. 2. Zaveduyushchiy otdelom toksikologii Vsesoyuznoy stantsii po raku kartofelya Vsesoyuznogo instituta zashchity rasteniy, g. Chernovtsy (for Sazonik).
(Plants, Effect of gamma rays on) (Potato wart)

LIPSITS, D.V.

Inclusion of methionine-S^{35} into proteins of cancer-resistant and cancer-susceptible potato varieties. Dokl. AN SSSR 146 no.4:947-950 O '62. (MIRA 15:11)

1. Nauchno-issledovatel'skaya stantsiya po raku kartofelya Vsesoyuznogo instituta zashchity rasteniy, g. Chernovtsy. Predstavleno akademikom A.I. Oparinym.
(Potatoes—Disease and pest resistance)
(Proteins) (Menthionine)

LIPSITS, D.V.

Studies on the biochemistry of wart resistance in potatoes. Biokhim.pl.i ovoshch. no.7:60-84 '62. (MIRA 16:1)

1. Laboratoriya fiziologii i biokhimii Vsesoyuznoy nauchno-issledovatel'skoy stantsii po raku kartofelya Vsesoyuznogo instituta zashchity rasteniy, g. Chernovtsy.
(Potato wart)

LIPSITS, D.V.

Immunochemical specificity of potato proteins in varieties resistant and susceptible to cancer. Dokl. AN SSSR 153 no.1: 216-219 N '63. (MIRA 17:1)

1. Nauchno-issledovatel'skaya stantsiya po raku kartofelya Vsesoyuznogo instituta zashchity rasteniy, Cher[redacted]. Predstavleno akademikom A.I. Oparinym.

NOSKOV, I.G., kand.sel'skokhoz.nauk (Tashkent); PONOMARENKO, G.Ya.; ZAKRIVIDOROGA, S.P.; ZAKRIVIDOROGA, Z.S.; LIPSITS, D.V.; LYUBOVSKAYA, P.I.; POLOTAY, V.A.; TARAKHOVSKIY, M.L.; FASTOVSKIY, V.L.

Letters to the editor. Zashch. rast. ot vred. i bol. 6 no.8:10 Ag '61. (MIRA 15:12)

1. Vsesoyuznaya stantsiya po raku kartofelya Vsesoyuznogo instituta zashchity rasteniy i Chernovitskiy meditsinskiy institut.

(Plants, Protection of)
(Synchytrium--Toxicology)

ZAKRIVIDOROGA, S.P.; ZAKRIVIDOROGA, Z.S.; LIPSITS, D.V.; LYUBOVSKAYA, P.I.; POLOTAY, V.A.; TARAKHOVSKIY, M.L.; PASTOVSKIY, V.L.

Toxicity for animals of the cancerous potato. Vop. pit. 21 no.5: 58-66 S-O '62. (MIRA 17:5)

1. Iz laboratorii biokhimii Vsesoyuznoy nauchno-issledovatel'skoy stantsii po paku kartofelya i kafedr farmakologii, patofiziologii, patoanatomii i gistologii meditsinskogo instituta, Chernovtsy.

LIPSITS, D.V.

Immunochemical studies of proteins of cancer-resistant and cancer-susceptible potato varieties. Dokl. AN SSSR 158 no.6:1443-1446 O '64. (MIRA 17:12)

1. Vsesoyuznaya nauchno-issledovatel'skaya stantsiya po raku kartofelya, Chernovtsy. Predstavleno akademikom A.I. Oparinym.

LIPSITS, D.V., kand.biolog.nauk

Biochemistry and potato wart. Priroda 54 no.2:62-63 F '65.
(MIRA 18:10)

1. Laboratoriya fiziologii i biokhimii Vsesoyuznoy nauchno-issledovatel'skoy stantsii po raku kartofelya Vsesoyuznogo nauchno-issledovatel'skogo instituta zashchity rasteniy, Chernovtsy.

LIPSITS, D.V.; KADYRMATOV, I.N.

Differences in the enzymatic attackability of proteins in potato varieties resistant and susceptible to cancer. Dokl. AN SSSR 163 no.1:250-253 Jl '65. (MIRA 18:7)

1. Vsesoyuznaya nauchno-issledovatel'skaya stantsiya po raku kartofelya Vsesoyuznogo instituta zashchity rasteniy, Chernovtsy.

LIPSITS, V., kand.ekonom.nauk

Bringing order to trade discounts will consolidate business accounting. Sov.torg. 36 no.12:18-20 D '62. (MIRA 16:1)
(Rebates) (Retail trade—Finance)

BREYEV, M.V., doktor ekon. nauk; SILIN, V.A.; BYCHEK, N.R., kand. ekon. nauk; GREBTSOV, G.I., kand. ekon.nauk; ITKINA, A.S., kand. ekon. nauk; KOKOREV, M.V., kand. ekon. nauk; KOMIN, A.N., kand. ekon. nauk; LIPSITS, V.R., kand. ekon. nauk; OZORNOV, A.K., kand. ekon. nauk; ORLOV, N.M., st. prepod.; SEREDNITSKAYA, Ye.K., kand. ekon. nauk; SMEKHOV, B.M., doktor ekon. nauk; FEL'D, S.D., kand. ekon. nauk; LISOV, V.Ye., red.; TARASOVA, T.K., mlad. red.; GERASIMOVA, Ye.S., tekhn. red.

[Planning the national economy of the U.S.S.R.] Planirovanie narodnogo khoziaistva SSSR. Moskva, Ekonomizdat, 1963. 621 p. (MIRA 16:8)

1. Moscow. Institut narodnogo khozyaystva.
(Russia--Economic policy)

LIPSITS, V.B.; KOMAROV, Ye.I., red.; GERASIMOVA, Ye.S., tekhn.red.

[Methods of working problems on the cost of production in industry] Metodika razrabotki zadanii po sebestoimosti produktsii promyshlennosti. Moskva, Gosplanizdat, 1958. 80 p. (MIRA 12:6)
(Costs, Industrial)

ARTEMOV, Yu.M., kand. ekonom. nauk; GAL'PERIN, N.S., kand. ekon. nauk; GUBIN, B.V., kand. ekon. nauk; ZHUKOV, V.N., kand. ekon. nauk; OCHKOV, M.S. kand. ekon. nauk; OSKORDOV, V.P., starshiy ekonomist; BARNGOL'STS, S.B., dotsent, kand. ekon. nauk; SIBIRYAKOV, L.Ye.; IVANOV, N.N.; RABINOVICH, M.A., ekspert; LIPSITS, V.B., kand. ekon. nauk; VOLKOV, S.I., kand. ekon. nauk; KOROLEVA, Ye.P., aspirantka; RYUMIN, S.M., red.; SUBBOTINA, K., red.; TELEGINA, T., tekhn. red.

[Planning and calculating the cost of industrial production] Voprosy planirovaniia i kal'kulirovaniia sebestoimosti promyshlennoi produktsii. Moskva, Gosfinizdat, 1961. 183 p. (MIRA 14:8)

1. Moscow. Nauchno-issledovatel'skiy finansovyy institut. 2. Sotrudniki Nauchno-issledovatel'skogo finansovogo instituta (for Artemov, Gal'perin, Gubin, Zhukov, Ochkov, Oskordov). 3. Vsesoyuznyy zaochnyy finansovo-ekonom. institut (for Barngol'ts). 4. Glavnyy bukhgalter Moskovskogo elektrozavoda (for Sibiryakov). 5. Starshiy konsul'tant Upravleniya bukhgalterskogo ucheta Ministerstva finansov SSSR (for Ivanov, Rabinovich). 6. Nachal'nik podotdela obshchikh ekonomicheskikh voprosov tsenoobrazovaniya Byuro tsen pri Gosplane SSSR (Lipsits). 7. Moskovskiy ekonomiko-statisticheskiy institut (for Koroleva)

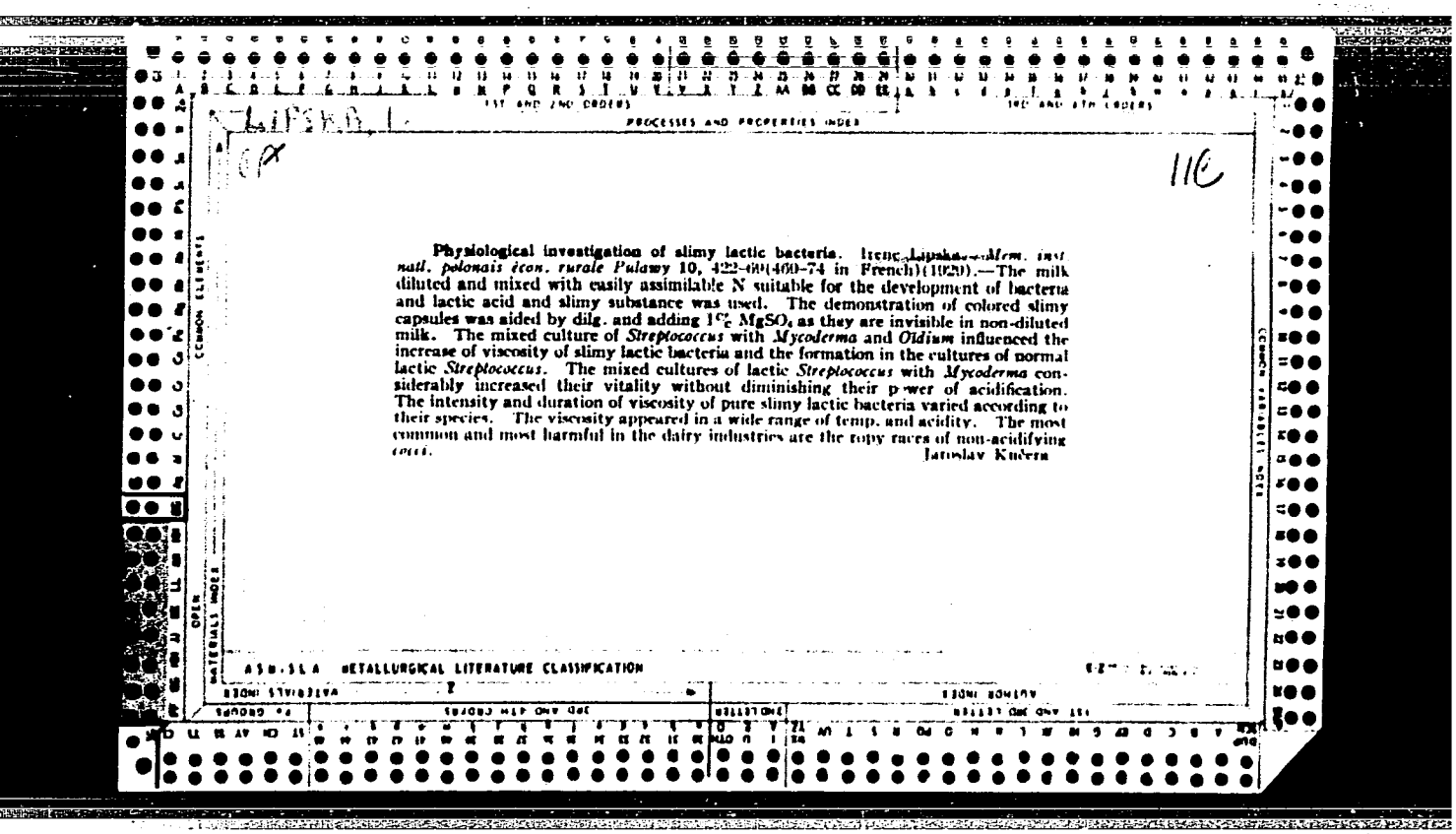
(Costs, Industrial)

Poland / C

LIPSKA, E.; URBANSKI, T.; BIERNACKI, S.

"Reactions of Aliphatic Nitro Compounds. X. Formation of Hexahydropyrimidine Ring Using 1-nitropropane, Formaldehyde, and Ammonia", P. 169, (ROCZNIKI CHEMII, Vol. 28, No. 2, 1954, Warsaw, Poland)

SO: Monthly List of East European Accessions (EEAL), LC, Vol. 4, No. 3, March 1955, Uncl.



PROCESSES AND PROPERTIES INDEX

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Physiological investigation of slimy lactic bacteria. Irene Lipska. *Mem. inst. natl. polonais écon. rurale Pulawy* 10, 422-69(460-74 in French)(1929).—The milk diluted and mixed with easily assimilable N suitable for the development of bacteria and lactic acid and slimy substance was used. The demonstration of colored slimy capsules was aided by dilg. and adding 1% $MgSO_4$ as they are invisible in non-diluted milk. The mixed culture of *Streptococcus* with *Mycoderma* and *Oidium* influenced the increase of viscosity of slimy lactic bacteria and the formation in the cultures of normal lactic *Streptococcus*. The mixed cultures of lactic *Streptococcus* with *Mycoderma* considerably increased their vitality without diminishing their power of acidification. The intensity and duration of viscosity of pure slimy lactic bacteria varied according to their species. The viscosity appeared in a wide range of temp. and acidity. The most common and most harmful in the dairy industries are the ropy races of non-acidifying *coccl*.

Jaroslav Kudera

A S M - S L A METALLURGICAL LITERATURE CLASSIFICATION

LIPSKA, IRENA

Lipska, Irena. "Cwiczenia z mikrobiologii rolniczej. Wyd. rozsz. i uzup." Warszawa Panstwowe Wydawn. Rolnicze i Lesne, 1950. 116 p. (Exercises in argicultural microbiology. (Illus., index) Enlarged and Supplemented Edition)

SO: Monthly List of East European Accessions, Vol.2, No.8, L.C., Aug.1953, Uncl.

LIPSKA, I.

Lysis of Mycobacterium tuberculosis. Med.dosw.Mikrob. 2 no.2:261-262 1950. (CLML 20:6)

1. Summary of the report given at 10th Congress of the Polish Microbiological and Epidemiological Society held in Gdansk, Sept. 1949.(Warsaw)

LIPSKA, I.

Previous observations on the therapy and preventive application of bacteriophages in Poland. Pediat. polska 26 no.4:449-453 Apr 1951. (CIML 21:1)

1. Of the Sanitary-Epidemiological Station in Warsaw.

LIPSKA, I.

Examination of colostrum with bacteriophages. Med. dosw. mikrob., Warsz. 4 no. 3:307-308 1952. (CLML 23:3)

1. Summary of work progress presented at 11th Congress of Polish Microbiologists held in Krakow May 1951. 2. Warsaw.

ANDRIYEVSKIY, Vasiliy Yakovlevich [Andriievs'kyi, V.IA.];
SMIRNOV, Igor' Vasil'yevich [Smyrnov, I.V.];
LIPSKA, V.K. [Lips'ka, V.K.], red.

[Veterinary obstetrics, gynecology, and artificial insemination] Veterinarne akusherstvo, ginekologiia i shtuchne osimeninnia. Kyiv, Urozhai, 1965. 415 p.
(MIRA 19:1)

LIPSKAYA, A.A.

Glassware

Mass production of artistic and quality glass products,
Leg. prom. 12 No. 4, 1952

Monthly List of Russian Accessions, Library of Congress, July 1952. Unclassified.

LIPSKAYA, A.A.

SHCHURENKOV, M.P.; LIPSKAYA, A.A.

Improving the assortment and quality of glassware. Leg.prom. 14 no.6:6-9 Je '54. (MLRA 7:8)

1. Nachal'nik proizvodstvennogo otdela Glavstekla (for Shchurenkov) 2. Glavnyy khudozhnik Glavstekla (for Lipskaya).
(Glassware)

LIPSKAYA, A.A.;NOSOV, N.L.

Our experience in the preparation of the fodder antibiotic terramycin. Veterinariia 36 no.11:62-64 N '59 (MIRA 13:3)

1. Zaveduyushchaya bakteriologicheskim otdelom L'vovskoy oblvet-laboratorii (for Lipskaya). 2. Zaveduyushchiy 2-y vetlechebnitsey g. L'vova (for Nosov).
(Terramycin) (Feeding and feeding stuffs)

Lipskaya, E. G.

Chair Biochem

The effect of the central nervous system on the biosynthesis of thyroxine. O. I. Volnar and E. G. Lipskaya (Stalin Med. Inst., Donbass). *Ukrain. Biokhim. Zhur.* 27, 286-93(Russian summary, 294)(1955).—As early as 3 hrs. after the injection into guinea pigs of 8 mg. of thyrotropic hormone of the hypophysis the thyroxine of the blood increases and continues to do so for a period of 13 hrs., when it begins to fall gradually, reaching its normal level at the end of 48 hrs. The repeated injection of the thyrotropic hormone under a specific set of environmental conditions results in the establishment of conditioned reflex responses, so that the injection of distd. H_2O under a similar set of environmental conditions into the conditioned animal calls forth an increase in the blood thyroxine. The inclusion of I^{131} into thyroxine following its injection into the body reaches its max. in 48 hrs., after which it begins to fall reaching a final min. at the end of five days. The thyrotropic hormone of the hypophysis activating the endosecretory function of the thyroid gland considerably enhances the process of I^{131} inclusion into thyroxine, reaching a max. in 24 hrs. and hastens the liberation of I^{131} by the thyroxine into the organism after 24 hrs. These phenomena can also be effected by conditioned reflex reactions. Therefore, it is concluded that thyroxine biosynthesis is under the control of the central nervous system. H. S. L.

MD

(1)

SHLYK, A.A.; LYAKHNOVICH, Ya.P.; KALMR, V.L.; LIPSKAYA, G.A.

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TITLE: Accumulation of chlorophyll in sugar-beet chloroplasts under the action of cobalt, molybdenum, and zinc

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TOPIC TAGS: chlorophyll, cobalt, molybdenum, zinc, plant physiology, protein

ABSTRACT: The effect of cobalt, molybdenum, and zinc applied separately and in combinations on the accumulation of chlorophylls a and b and carotenoids in chloroplasts and per surface unit was studied. Sugar-beet grown in field conditions at the "Krasnoye Urochishche" biological station of the Belorussian State University was used in the investigations. The trace elements were applied as follows: 1) cobalt, molybdenum, and zinc applied separately in doses of 100 milligrams per square centimeter; 2) the elements applied in the same doses in combinations; 3) in one-third of the above doses in combination. The amount of chlorophyll was determined on the basis of its accumulation in a surface unit of one square centimeter; the Godiyev-Sudnik method was used to determine the chloroplasts on one square centimeter of a leaf's mesophyll, making it possible to calculate the quantity of chlorophyll per chloroplast. It was found that the application of cobalt initially causes a decline in the accumulation of chlorophyll a; this is rapidly followed by a considerable

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increase in the accumulation of the chlorophylls with their quantity exceeding that in the controls; the initial decline is probably due to the fact that cobalt when first applied is in an ionic form; later the element combines with the protein substances, a combination which favorably affects the formation of chlorophyll. Molybdenum positively affects the accumulation of the chlorophylls, and of the carotenoids in particular. The same is true of zinc. In combinations the trace elements have a somewhat different effect. The initial depression of the accumulation of chlorophylls observed when the trace elements are separately applied does not occur. An increase in the accumulation of the chlorophylls and carotenoids begins almost immediately after the combinations of the elements are applied. This somewhat different character of their action is probably due to the antagonistic action of the ions which depress the toxic actions of the zinc and molybdenum. By the end of the vegetation period, however, there is no difference between the efficacy of the elements whether applied separately or in combinations. The increase in the accumulation of the chlorophylls and carotenoids is particularly noticeable during the second half of the vegetation period. This may be explained as being due to the greater intensity of the synthetic process and the greater stability of chloroplast structures in this period. Orig. art. has: 4 figures. [JPRS]

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